Executive Summary

As Washington moves new digital government initiatives forward, recognition of the remarkable value of Geographic Information Technology (GIT)* continues to come to light. GIT provides public policy makers and citizens with the tools necessary to understand complex issues, create intuitive interfaces to information and identify and evaluate potential solutions. State agencies rely on the technology to provide mission-critical support to activities as wide ranging as transportation planning, natural resource and wildlife management, emergency response, homeland security, economic development and health and human services. Most of the state's federal, tribal and local government partners depend heavily on the technology.

While some individual agencies have achieved notable success, the lack of a coordinated statewide strategic approach to the use of GIT limits the potential of this technology to fully support informed public policy and decision-making on a broad scale. An enterprise* approach to the imple-mentation of GIT will enhance cross-jurisdictional collaboration and the integration of data and information. In this way, the state can reduce the likelihood of duplicated efforts, incompatible or conflicting datasets and inconsistent analytical results.

Across the wide range of GIT uses, there is a set of shared challenges. Addressing these challenges will make the technology more useful to govern-ment policy makers by bringing clarity to issues and providing access to information for decision makers and citizens. More effective use of GIT will result in better decisions.

Focused on Washington state agencies, this GIT plan frames its strategic objectives in the context of cross-governmental partnerships fundamental to the successful resolution of environmental, transpor-tation, public safety and other multi-jurisdictional problems. It is only through a common vision and cross-governmental partnerships that the full potential of GIT will be realized.

This plan focuses on three key strategies and eight associated objectives to deal directly and effectively with the common challenges:

Develop a common vision and architecture for GIT deployment across state agencies with the long-term goal of linking to federal and local architectures.

Objective 1a: Develop an Enterprise Architec-ture* that meets shared GIT needs. Enterprise Architecture identifies elements of shareable infrastructure to lower costs and promote joint investments; and increases agency capacity to support mission-critical policy decisions both within and across organizations.

Objective 1b: Identify an optimal role for the state as the catalyst that coordinates GIT needs across government jurisdictions. Clearly defined roles and governance lead to greater collaboration and sustainable partnerships, as well as fewer investment redundancies and data incompatibility issues.

* Definitions for words marked with an asterisk (*) are included in the glossary.

Executive Summary

Leverage GIT Investments through enhanced access to data and applications.

Objective 2a: Produce multi-use geographic data through partnerships. Integrate Washington Geospatial Framework Data Activities* with the Washington GIT Enterprise Architecture. Timely and sufficient data provide information critical to sound public policy and decision making. Data will be managed to reflect a *develop once – use many times* ethic.

Objective 2b: Enhance data discovery and access through a clearinghouse and central portal. An enhanced clearinghouse/portal will reduce the enterprise cost of data, strengthen existing infrastructure investment, reduce the need to maintain redundant, inconsistent data and improve access to existing data.

Objective 2c: Continue to develop standards as a way to facilitate data integration and access. As agencies standardize certain practices, cost effective data sharing and integration become possible, along with a new capacity for on-the-fly data analysis and ad hoc data integration.

Objective 2d: Protect sensitive data as necessary. Achieving this objective will improve access to unrestricted data and protect those areas of information that contain sensitive data.

Integrate state GIT activities with federal and local interests and needs through enhanced collaboration and initiatives that cross jurisdictions.

Objective 3a: Facilitate creation of a statewide, local jurisdiction GIT forum with ties to the Information Services Board (ISB)* through the GIT Committee and the Washington Geographic Information Council (WAGIC). The forum will augment state and federal coordination and provide opportunity to shape policies and share implementation responsibilities and resources. Statewide initiatives benefit as they receive accurate, up-to-date data and information from local jurisdictions.

Objective 3b: Align state data and portal activities with the United States Geographic Survey (USGS) National Map and Geospatial One-Stop.* Aligning state GIT activities with national initiatives will add depth and range to prospects for partnership and new funding sources. Supporting and integrating state and local government GIT activities with these national initiatives will lead to improved data and information exchange and interoperability.

Implementation of these strategies and objectives is designed to resolve shared challenges. They will help government policy and decision makers arrive at better decisions faster through improved access to accurate, timely and pertinent information. In many cases benefits will be felt in the near term as redundancies are identified and removed. Other benefits will accrue over the long term as shareable infrastructure and key data and information are collected and maintained once but used many times throughout the enterprise with minimal integration and access issues.

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Introduction

Introduction

Washington state secured its place as a visionary leader in the use of information technology (IT) with early adoption of the Internet as a channel for convenient and accessible public service. Washington's leadership and success rests on a series of digital government innovations that include the use of technology to support effective public policy making. As Washington moves new digital government initiatives forward, recognition of the remarkable value of Geographic Information Technology (GIT)[*] is coming to light. GIT provides public policy makers and citizens with the tools to understand complex issues, create intuitive interfaces to information and identify and evaluate potential solutions.

Several Washington state agencies have established themselves individually as national leaders in the use of GIT in the areas of environmental and natural resource management and public health and safety programs. However, unqualified success has been moderated by the unique and complicated business challenges that face government organizations. Technical and institutional barriers can render cross-jurisdictional projects ineffective and difficult to manage and lead to the creation of redundant, stand-alone solutions and infrastructure. The lack of a coordinated statewide strategic approach to the use of GIT limits the potential of this technology to fully support informed public policy and decision making on a broad scale.

Recognizing the limitations of the current approach to managing GIT, Washington state organizations are working to pool resources to meet shared needs while dealing with uncertain funding streams and limited staff resources. An enterprise* approach to implementing GIT will facilitate cross-jurisdiction collaboration and the integration of data and information. In this way, the state can reduce the likelihood of duplicated efforts, incompatible or conflicting datasets, and inconsistent analytical results.

State agencies rely on the technology to provide mission-critical support to activities as wide ranging as transportation planning, natural resource and wildlife management, public safety, emergency response, homeland security, economic development and health and human services. Most of the state's federal, tribal and local government partners also depend heavily on the technology (see "Spotlight on GIT" for examples).

Geographic Information Technology is a critical decision support tool for government policy makers and citizens as they seek solutions to these complex areas of concern. Spatial and tabular data, including data provided by federal, state, regional, county and municipal governments, are used in planning and decision making processes. GIT provides the platform for assembling the data, performing analyses and communicating the results.

The Washington State Geographic Information Strategic Plan presents a vital roadmap for the utilization of the state's GIT assets on an enterprise basis. The building blocks of this plan can be found

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[*]Definitions for words marked with an asterisk (*) are included in the glossary.

Introduction

in the Washington State Enterprise Information Technology Plan[+], which leverages collaboration, coordination and a common vision to make the most effective use of limited resources. Focused on Washington state agencies, the GIT plan frames its strategic objectives in the context of cross-governmental partnerships fundamental to the successful resolution of environmental, transportation, public safety and other multi-jurisdictional problems. It is only through a common vision and cross-governmental partnerships that the full potential of GIT will be realized.

This plan builds on the strategies outlined in the 1999 strategic plan, *Planning a Geographic Information Infrastructure – A Strategy to Support Washington's Quality of Life*, and leverages the GIT community accomplishments of the last several years.

Spotlight on GIT
How the technology is being used

Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) project. Initiated in 1989, the PHS project provides important fish, wildlife and habitat information for the purposes of land-use planning. Its primary users are local governments, state and federal agencies, private landowners and consultants and tribal biologists. PHS is one of the agency's mechanisms for transferring fish and wildlife information from its resource experts to those who can protect habitat.

PHS is a GIT-based system that has distributed thousands of maps, reports and digital products since its inception. Today, the system addresses 100 or more requests per month for information. Incorporated into the comprehensive plan and critical areas ordinances by the majority of Washington's cities and counties, PHS data helps local government comply with the Growth Management Act. Routinely, WDFW biologists use PHS data during consultations with a variety of organizations and private landowners in an effort to influence land use decisions in ways that benefit wildlife and minimize the impact of public use of private property.

GIT-related challenges faced by the current system include:
1. maintaining current data and supporting documentation;
2. implementing an enterprise approach to data management, presentation and distribution that brings together disparate efforts within an organization;
3. adapting to and taking advantage of new technologies while continuing to support customers;
4. protecting sensitive data, while making it available to responsible parties involved in critical decisions that affect wildlife and supporting habitats; and
5. ensuring customers have information (metadata) about the data they receive, how it might be used and its limitations.

[+] Contact the Washington State Department of Information for details at 360-902-3447.

Progress on Issues

Accomplishments to Date

The process of developing GIT as an enterprise-wide tool has progressed in incremental steps as resources have become available. Notable achievements include:

■ Data Sharing: The Information Services Board (ISB) has adopted standards for metadata*, projection and coordinate systems, which provide elements of a common format for shared data. As agencies collaborate on data development efforts for efficiency and consistency, implementation of these standards has led to the coordination of data conversions and ruled out duplication. Framework projects for cadastral*, hydrography* and transportation continue to move toward a consistent geospatial* base framework for data sharing.

■ Data Access: Several areas of progress involve data access. The Washington State Geospatial Clearinghouse* provides a mechanism for discovering available data; the Natural Resource Data Portal* provides access to salmon and watershed information; the US Geographical Survey (USGS) sponsored National Map* for the Washington-Idaho project and provides access to data for homeland security purposes; ongoing implementation of the National Map in the Tacoma-Seattle-Everett urban area promises to provide web-based access to citizens for base map data; and several state agencies have provided web-based access to data they steward.

■ Data Collection: Several data collection efforts made use of creative partnerships to share expenses. Included in these collaborative activities are the Washington State Remote Sensing Consortium (WARSC)*, the Puget Sound LIDAR consortium*, the Department of Natural Resources/Washington State Department of Transportation (DNR/WSDOT) digital ortho imagery* partnership, the USGS/NGA (National Geospatial-Intelligence Agency) urban area ortho imagery for homeland security,* the Southeast Washington ortho imagery consortium* and more.

■ Emergency Response: Several agencies provided GIT support to the TOPOFF-2* terrorism exercise in May 2003 as a way to evidence the value of GIT in emergency response.

These accomplishments provide a foundation for future enhancements. However, given the nature of program-based budgeting* and limited funding availability, improvements will likely continue as discrete enhancements unless the GIT community adopts an enterprise approach to utilizing and funding the technology.

This plan identifies key challenges that need attention so that GIT partners can direct limited resources to achieve the greatest impact, while sustaining a structure within which individual efforts will contribute to the whole.

Shared Challenges to
Full Utilizationof GI Technology

Across its wide range of uses, there is a set of shared GIT challenges. Addressing these challenges will make the technology more helpful to government policy makers by bringing clarity to issues and providing access to information for decision makers and citizens. More effective use of GIT will result in better decisions.

1. The management, presentation and distribution of spatial data by Washington state agencies and their partners lacks a true enterprise approach to information management, access and distribution. Lack of shareable or common data infrastructure leads to *information islands* and results in duplicated data development and management efforts.

2. Local, federal or tribal organizations have difficulty partnering with Washington state agencies when agencies act as individual organizations rather than as a collaborative GIT enterprise. As a result, state agencies are less effective, less suitable partners in cross-jurisdictional GIT initiatives.

3. Maintaining current data and its supporting documentation is critical for information manage-

ment. While GIT excels at capturing and portraying complex relationships, it is only as good as the underlying data. Comprehensive, current data – while expensive to achieve and maintain – are essential for outlining policy-making options and supporting executive decision processes.

4. Current governance and coordination mechanisms, helpful in the past, are not sufficient to guide the operation of a statewide enterprise application of GIT.

5. State agencies struggle with the implementation of newer GIT technologies while continuing to support customers and existing systems. Newer technologies may offer demonstrable efficiencies and capabilities, however the transition to new technologies can be held back by the need to invest significant budget dollars elsewhere and divert key resources.

These common challenges represent collaborative opportunities for agencies in which they can develop shareable solutions that can be replicated many times across government programs, departments and agencies.

Spotlight on GIT
How the technology is being used

Protecting Public Safety and Preparing for Emergencies. Geographic Information Technology is particularly useful for managing the response to man-made or natural disasters. Two recent emergency events – an exercise and a real emergency – illustrate the value and challenges of using GIT in these situations.

TOPOFF-2 Response Exercise
Top Officials-2 was a multi-day emergency response exercise involving federal, state and local governments. There were two sequential components to the exercise – a cyber terrorism incident and a dirty bomb (radioactive material release) event. The full-scale field exercise in May 2003 tested response capabilities to a radioactive dirty bomb exploding in south Seattle. Mock terrorism events occurred simultaneously in Chicago and Vancouver B.C. Here in Washington, several hundred first responders and emergency managers participated including the Washington Army National Guard, Emergency Management Division of the Washington Military Department, the Washington State Patrol and the departments of Information Services, Health, Agriculture, Ecology and Transportation. This exercise underscored the value of coordinating GIT in advance of the event. The GIT effort for TOPOFF-2 performed smoothly due to the pre-event coordination done by the city, county and state GIT mangers who facilitated the exchange of information with an FTP* site.

2001 Nisqually Earthquake
In response to the 2001 Nisqually Earthquake, a GIT-based tool (HAZUS*) was used effectively to obtain a Presidential Declaration and federal assistance in minimal time. HAZUS is instrumental in the assessment of earthquake and flood risk and loss estimation. State, regional and local governments use HAZUS to plan for earthquake and flood loss, mitigation, response and recovery, as well as emergency preparedness activities. The national data provided with HAZUS allows for very coarse estimation; local updates are needed to improve accuracy. HAZUS is an important planning tool that helps emergency response managers minimize damage and loss of life with proactive prevention measures. Prevention minimizes the potential for natural hazards to develop into natural disasters.

The TOPOFF-2 exercise and recent use of HAZUS have underscored some common GIT data availability issues:
1. ready access to spatial data and information is critical for rapid response to emergencies;
2. data is not available in standard exchange formats;
3. data lineage and pedigree is documented rarely, so it is hard to know if the data is suitable for a given purpose; and
4. state agencies often hold needed data but it is difficult to determine whose transportation or water data should be used.

Strategies for Resolving Challenges

This plan focuses on three key strategies to deal directly and effectively with these common challenges:

1. Develop a common vision and architecture for GIT deployment across state agencies with a long-term goal of linking to federal and local architectures.

2. Leverage GIT investments through enhanced access to data and applications.

3. Integrate state GIT activities with federal and local interests and needs through enhanced collaboration and initiatives that cross jurisdictions.

These strategies are designed to resolve shared challenges. If supported, they will help government policy and decision makers make better decisions faster through better access to accurate, timely and pertinent information. In many cases, benefits will be felt in the near term as redundancies are identified and removed. Other benefits will accrue over the long term as shareable infrastructure and key data and information are collected and maintained once but used many times with minimal integration and access issues.

Strategy One: Develop a common vision and architecture for GIT deployment across state agencies with a long-term goal of linking to federal and local architectures.

Objective 1a: *Develop an Enterprise Architecture* that meets shared GIT needs.*

Aligned with the state-level Enterprise Architecture initiative, the state-level GIT Enterprise Architecture strategy describes a common vision and architecture for the deployment of GIT to meet the core business needs and strategies that organizations share.

Enterprise Architecture (EA) is a business tool that helps manage complexity and change. Because it is a framework for decision-making, Enterprise Architecture sets the stage for agreement on solutions that cut across shared information needs. EA will establish a roadmap for the Washington state government enterprise to follow as it works to achieve strategic business results for both small and large agencies.

Expected Outcome: The cost of developing and implementing a GIT enterprise strategy is offset by the value and benefits expected to accrue with EA implementation among enterprise and constituent agencies. EA creates a common framework that makes it possible for organizations to integrate with other communities; integration enables the state to harness its organizational assets and information. Enterprise Architecture identifies elements of shareable infrastructure to lower costs and promote joint investments; increases agency capacity to support mission-critical policy decisions both within and across organizations; and makes it possible for state agencies within the GIT enterprise to take advantage of new cost efficiencies and respond more effectively to information needs.

Strategies for Resolving Challenges

Objective 1b: *Identify an optimal role for the state as the catalyst that coordinates GIT needs across government jurisdictions and identify the best organizational and operational structure to meet those needs.*

Work together with the Information Services Board (ISB) Enterprise Architecture process to develop GIT governance and decision-making mechanisms that facilitate interagency collaboration. Take advantage of this collaborative environment to position the state GIT enterprise as a desirable and beneficial partner for federal, local and tribal jurisdictions. The EA process will examine and determine the appropriate role for the state GIT enterprise in relation to its federal, local and tribal partners.

Expected Outcome: Reaching this objective will provide an opportunity to improve coordination and the governance mechanisms needed to clarify and define operational roles and responsibilities. Clearly defined roles and governance practices have several positive outcomes, not the least of which are greater collaboration and sustainable partnerships among organizations, fewer redundancies and incompatibility issues, a greater chance for agreement among state agencies for consistency and a unified interface.

Priority Actions	Timeframe
1a. Launch GIT Enterprise Architecture Initiative. - Identify EA executive sponsors - Determine approach and involve Wash. Enterprise Architecture program - Establish technical workgroup and inventory GIT infrastructure - Develop GIT EA principles - Draft GIT EA and vet with stakeholders	Sept -04 – Jan '05
1b. Modify organizational structure to meet needs based on outcome of EA governance discussions. 1c. Identify and execute EA implementation schedule.	Dec '04 – June '05

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Strategies for Resolving Challenges

Strategy Two: Leverage GIT investments through enhanced access to data and applications.

Objective 2a: *Produce multi-use geographic data through partnerships. Integrate Washington Geospatial Framework Data Activities with the Washington GIT Enterprise Architecture.*

This objective seeks to leverage the state's investment in the Nation Spatial Data Initiative (NSDI) Framework Data themes by incorporating these activities into the GIT strategic vision. Ready access to framework data is the most important element in the provision of current data and information to policy makers.

Expected Outcome: Rapid, direct access to framework data will accelerate and improve decision-making process for transportation, hydrography, elevation, digital ortho imagery *, land ownership, administrative boundaries and other data themes. Timely and sufficient data provide information critical to sound public policy and decision-making. Data will be managed to reflect a *develop once – use many times* ethic.

Objective 2b: *Enhance data discovery and access through a clearinghouse and central portal. Cost effective data distribution will depend on the improvement of the existing clearinghouse/portal infrastructure. An enhanced clearinghouse/portal will allow discovery* and access to the multiple data resources maintained currently by state agencies as stand-alone resources.*

Expected Outcome: An enhanced clearinghouse/portal brings a high value service to the GIT enterprise. Reducing the enterprise cost of data, the portal will strengthen existing infrastructure investment, eliminate the need to maintain redundant, inconsistent data and improve the access to and utilization of existing data over the long-term.

Objective 2c: *Continue to develop standards as a way to facilitate data integration and access. Standards make it possible to transform data into information. This is particularly true of the unique and wide ranging applications of spatial data. The focus will be on the fundamental NSDI data themes to create common base data layers. These common data layers then serve as a standards-based registration network for other scientific and theme-specific data. Selected, uniformly adopted standards will expand the efficacy, capability and value of the GIT enterprise.*

Expected Outcome: Standards that meet common business needs across state agencies and other organizations improve data integration. As agencies standardize certain practice, cost-effective data sharing and integration become possible, along with a new capacity for on-the-fly data analysis and *ad hoc* data integration.

Objective 2d: *Protect sensitive data and attributes as necessary. This objective will ensure that the GIT Enterprise Architecture supports protected, targeted access that safeguards certain*

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Strategies for Resolving Challenges

environmental information, public safety and emergency management data, without impeding access to unprotected spatial data. Compliance with Washington State Public Disclosure Law will require GIT stakeholder governance structures and domain stewards to identify data themes and/or individual attributes that need limited or protected access.

Expected Outcome: GIT partners anticipate that achieving this objective will improve access to unrestricted data and protect those areas of information that contain sensitive data.

Priority Actions	Timeframe
2a. Assess and continue implementation of Washington framework data activities if appropriate. 1. Revisit existing framework themes, identify operational status and plan for near-term enhancement. 2. Confirm agencies' commitment to framework participation. 3. Integrate framework activites with GIT Enterprise Architecture and seek sustainable resources. 4. Identify and launch next logical framework data themes (Orthoimagery photo and satellite, elevation, others).	Sept -04 –Dec '04 Dec '04 – April '05 Dec '04 – June '05 Nov '04 – Dec '04
2b. Deploy an enhanced Washington NSDI Clearinghouse that supports data discovery and access, while leveraging cross-agency initiatives (WAGIC, WDFW, SWIM*, others). *Washington Department of Fish and Wildlife, Salmon and Watershed Information Management	Nov '04 – March '05
2c and 2d. Examine and propose the next logical set of GIT-related standards to facilitate data accessibility and integration through a revitalized WAGIC Standards WG.	Dec '04 – June -'05

Strategies for Resolving Challenges

Strategy Three: Integrate state GIT activities with federal and local interests and needs through enhanced collaboration and initiatives that cross jurisdictions.

Objective 3a: *Facilitate creation of a statewide, local jurisdiction GIT forum with ties to the ISB through the GIT Committee and WAGIC. This strategy recognizes the unique yet diverse spatial data requirements of scale, accuracy and coverage for local jurisdictions. A forum focused on coordinating the use of GIT at the county and city/municipality levels reflects the importance that local data and information play in developing a statewide perspective for policy makers. An effective local government forum would allow local jurisdictions to develop and articulate their shared needs and a common vision that will integrate more readily with regional and statewide initiatives.*

Expected Outcome: There are four key benefits to the development of a GIT forum for local government: the forum will augment state and federal forums, provide opportunity to shape policies and share implementation responsibilities and resources. Statewide initiatives benefit as they receive accurate, up-to-date data and information from local jurisdictions.

Objective 3b: *Align state data and portal activities with the USGS National Map and Geospatial One-Stop. A shared and steadfast NSDI vision will unify the focus for GIT partners and establish motivating principles with which to move forward on spatial data initiatives. These elements are critical within the context of important federal activities, such as The National Map and Geospatial One-Stop, which represent the logical evolution of the National Spatial Data Infrastructure program of the late 1990s.*

Strategies for Resolving Challenges

Expected Outcome: Supporting and integrating state and local government GIT activities with national initiatives will lead to improved data and information exchange and interoperability. Aligning state GIT activities with these national initiatives will add depth and range to prospects for partnership and new funding sources.

Priority Actions	Timeframe
3a. Facilitate discussion among local jurisdiction GIT providers, which will result in their development of a local jurisdiction coordination forum with formal ties to WAGIC and ISB/GIT, modeled after local jurisdiction IT coordination forum.	Oct '04 –Mar '05
3b. Based on 1b activities, modify organizational structures to enhance cross-jurisdiction GIT coordination.	Mar '05 – Sep '05
3c. Refocus Framework Management Group to embrace the evolving nature of National Map and NSDI.	Dec '04 –June '05

Spotlight on GIT

How the technology is being used

The I-405 Congestion Relief and Bus Rapid Transit Projects* address traffic delays along one of Washington's most important economic travel corridors. Current congestion delays from Renton through Bellevue often take motorists hours to navigate and cost citizens millions of dollars in lost time, wasted fuel and missed opportunities.

Between 1999-2002, regional consensus was reached on transit, roadway and environmental investments to be made over the next 20 years along the I-405 corridor. These investments will save travel time, increase transit service, improve salmon habitat and reduce traffic accidents, regional carbon monoxide emissions and storm water runoff.

Geographic Information Technology (GIT) plays an important role in these large-scale initiatives with its ability to enhance planning, permitting, environmental assessment, community impact assessment, capital project scope development, traffic congestion analysis, collision analysis, communication and accountability functions. Spatial and tabular data from a variety of sources, including data provided by federal, state, regional, county and municipal governments, are used in the planning and decision making processes. GIT provides the platform for assembling data, performing analyses and creating communications.

Ventures, such as the I-405 Congestion Relief and Bus Rapid Transit Project, present GIT challenges relative to data discovery, the timely gathering and maintenance of data and the management of data that proliferates throughout the process. Unfortunately, efforts are often duplicated at various stages, which leads to unplanned costs, adds negative impacts to new and existing infrastructure and increases the potential for data misuse.

Glossary: Definitions and Acronyms

Discovery
Used here in the context of data, it refers to enabling potential users of spatial information and data to find or 'discover' the data.

Enterprise
The term enterprise is scalable from a single organization to multiple entities. The use of the word enterprise within the GIT Strategic Plan refers primarily to state agencies, while acknowledging federal, local and tribal partners.

Enterprise Architecture is a business tool designed to:
- develop and implement a shared enterprise vision and architecture;
- develop and implement enterprise governance mechanisms for operational decision making;
- guide strategic information technology choices and unify state policies;
- manage the state's resources as assets within its portfolio of investments;
- enable shared GIT services;
- extend business linkages between federal and local jurisdictions;
- manage organizational and technological change and complexity; and
- identify duplicative investments, gaps, and opportunities for collaboration.

FTP site
File Transfer Protocol (FTP) site refers to a web-based mechanism for making data available for download by placing a copy of the data in a web-accessible directory.

Geographic Information Systems (GIS)
This term refers to data, software, hardware, applications and the human resources necessary to address program-specific or enterprise information needs. The unique integration capabilities of GIS allow disparate datasets to be brought together to provide a complete picture of issues and guide decision makers toward potential solutions.

Geographic Information Technology (GIT)
Increasingly, this term is applied to the broad application of GIS capabilities within the context of enterprise information technology. GIT at the enterprise level, denotes policy, governance, coordination and the operational mechanisms necessary for successful application of GIS capabilities.

Geospatial One-Stop (GOS) Portal
Visitors to the Geospatial One-Stop portal (www.geodata.gov) gain rapid and efficient access to comprehensive geospatial information from federal agencies and a growing number of state, local, tribal and private agencies.

HAZUS
A nationally applicable, standardized methodology and software program comprised of models that estimate the potential losses from earthquakes, floods and hurricane winds. The Federal Emergency Management Agency (FEMA), under contract with the National Institute of Building Sciences (NIBS), developed HAZUS-MH.

Glossary: Definitions and Acronyms

Information Services Board (ISB)
The ISB is the legislatively recognized body in Washington state responsible for information technology policy and oversight. This 15-member board is made up of leadership from the state agencies, the Legislature, courts, higher education and the private sector. isb.wa.gov/

Infrastructure
In this document the term is used to refer to the software, network and hardware components that comprise enterprise GIS solutions.

I-405 Congestion Relief and Bus Rapid Transit Projects
For several years, representatives from every city and public agency in the I-405 Corridor worked overtime to reach regional agreement on a solution to the I-405 transportation crisis. More information about the process and improvement plan can be found at www.wsdot.wa.gov/projects/I-405/

Metadata
Metadata or "data about data" describes the content, quality, condition and other characteristics of data. In February 2003 the ISB adopted subsets of the Federal Geographic Data Committee's Content Standard for Digital Geospatial Metadata as the state standard.

NGA (National Geospatial-Intelligence Agency) urban area ortho imagery for homeland security
This collaborative effort between Spokane County, USGS and two bordering Idaho counties resulted in high resolution ortho photos that were used to assess potential emergency management and homeland security issues and to identify mitigation plans.

(NSDI) Framework
The Nation Spatial Data Initiative (NSDI) framework is a collaborative effort to create and make widely available a source of basic geographic data. The NSDI framework provides the most common data themes employed by geographic data users within an environment and supports the development and use of these data. The framework's key aspects are seven themes of commonly used digital geographic data: procedures, technology and guidelines that provide for integration; sharing and the use of these data; and institutional relationships and business practices that encourage the maintenance and use of data.

- Hydrology – an NSDI data theme depicting surface water features like lakes, rivers and streams
- Cadastre – an NSDI data theme depicting land ownership boundaries
- Digital Ortho Imagery – an NSDI data theme usually derived from aerial photos or satellite images that have been specially processed (ortho-rectified) to remove instrument, platform and environmental induced distortions

National Map
The National Map is the product of a consortium of federal, state and local partners

Glossary: Definitions and Acronyms

that provides geospatial data to enhance America's ability to access, integrate and apply geospatial data on a global, national and local scale. Information can be found at nationalmap.usgs.gov/.

Program-based budgeting

A common budgeting approach that allocates funding for specific uses within an organization, aligned with a particular business activity. While useful for purposes of program accountability, the approach creates barriers to funding cross-organizational information technology solutions.

Puget Sound LIDAR consortium

A regional consortium of local jurisdiction staff and federal research scientists devoted to developing public domain, high resolution LIDAR (Light Distance And Ranging) topography and derivative products for the Puget Sound region. LIDAR is a laser-based technology that, for this purpose, is installed on an airplane to collect precise data about features on the earth's surface.

Salmon and Watershed Information Management (SWIM)

This group is a cross-agency natural resource data and information coordination group that focuses on data and information needs related to salmon recovery. The SWIM coordinator is located in the Interagency Committee for Outdoor Recreation (IAC).

Southeast Washington ortho imagery consortium

A regional consortium coordinated by Walla Walla County for the purpose of acquiring and distributing digital orthophotography.

Spatial data

Spatial data is data that has the unique characteristic or attribute of being associated with a particular location on the earth. Location may be expressed in terms of a coordinate pair, street address or a reference to a geographic region or sector.

TOPOFF-2

Top Officials-2 was a national, multi-day emergency response exercise involving federal, state and local governments (for more details, see *Spotlight on GIT, page 12*).

Washington Geographic Information Council (WAGIC)

WAGIC is a statewide, multi-jurisdiction coordination forum for fostering the advancement of geospatial information infrastructure (data, people, technology and policy) and its use by federal, state, regional, local governments, tribal and private entities.

Washington State Geospatial Clearinghouse

A web-based spatial data and information discovery tool. The clearinghouse is a registered node on the national network of clearinghouses. WAGIC, University of Washington Map Libraries and Department of Information Services jointly sponsor the Washington State Geospatial Clearinghouse.

Glossary: Definitions and Acronyms

Washington Geospatial Framework Data Activities

These are the data acquisition and maintenance activities coordinated through WAGIC in conjunction with the National Spatial Data Infrastructure. Examples of framework data themes include transportation (highways, roads and streets) cadastre (land ownership), hydrography (lakes, rivers and streams), and elevation.

Washington State Remote Sensing Consortium (WARSC)

Washington State Remote Sensing Consortium (WARSC) is a WAGIC-sponsored multiple jurisdiction initiative that has pooled a limited set of funds for the purpose of acquiring standards-based statewide coverage of ortho-rectified satellite imagery.